Dobson Dunavant

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Skills

Languages: TypeScript, JavaScript, Python, SQL, Bash, HTML, CSS, JSON
Cloud/DevOps Tools: AWS, AWS CDK, Terraform, Ansible, Docker, Kubernetes, Git, GitHub Actions, GitOps, Datadog
Frameworks/Libraries: React, Node.js, Express, Next.js, GraphQL, Axios, Jest, React Testing Library, K6
Databases: PostgreSQL, RDS Aurora, MySQL, Redis, MongoDB, Redshift

Experience

Cloud Platform Engineer II, Savvas Learning Company – Remote, USA Dec 2023 – Present

- Architected and executed complete 0-downtime GCP to AWS cloud migration using Infrastructure as Code, transitioning App Engine to ECS Fargate, Cloud Storage to S3, BigQuery to Redshift through AWS CDK and Terraform orchestration
- Led greenfield AWS CDK Infrastructure as Code project managing all of Outlier's multi-environment AWS infrastructure, implementing TypeScript-based constructs for ECS, RDS Aurora, S3, networking, and monitoring
- Built secure, FERPA-compliant cloud networking architecture using AWS Site-to-Site VPN and Infrastructure as Code (AWS CDK), ensuring compliance and enabling secure cross-cloud transfers of sensitive student data
- Engineered custom AWS WAF solution with multi-layered scope-down rules and whitelisting logic to block nefarious traffic while ensuring legitimate signed traffic always passes through, protecting production APIs
- Built end-to-end data pipeline using AWS Kinesis Firehose streaming CloudWatch application logs to Redshift, creating materialized views aggregating disparate log data for DBT ingestion and Tableau analytics
- Established comprehensive Datadog observability platform using AWS CDK to deploy ECS Fargate sidecar agents, custom monitors, and dashboards, improving mean time to detection by 40% while reducing costs $53,000+ annually
- Orchestrated 0-downtime, blue-green deployments across multiple ECS Fargate services using AWS CodePipeline/CodeDeploy with GitHub Actions CI/CD integration, linear traffic switching, and automated rollbacks
- Led 3 major cloud infrastructure epics from planning to completion, including 0-downtime RDS PostgreSQL 12 to Aurora PostgreSQL 16 migration and greenfield AWS CDK IaC project with minimal senior oversight
- Implemented multi-region caching layer via AWS ElastiCache with automated failover for student data, reducing API latency by 29% during peak traffic periods and improving system resilience
- Architected modular k6 load testing suite with Datadog StatsD integration and Docker-based orchestration, creating reusable test patterns and developer-focused documentation that democratized performance testing across engineering teams, enabling developers to validate API performance during development rather than post-deployment
- Identified and eliminated critical performance bottleneck in student dashboard API using k6 load testing framework, replacing expensive LEFT JOIN with inverse relationship lookups leveraging existing database indexes to reduce p95 response time from 5.8s to 795ms (7.3x faster), significantly enhancing user experience during peak traffic
- Led planning and development of semester-long course epic requiring multiple new full-stack features, completing deployment in 6 weeks (2 weeks ahead of deadline) by coordinating parallel workstreams
- Developed full-stack solutions for Outlier.org educational platform using React, Node.js, PostgreSQL, Jest, AWS, and GitHub in Agile environment, implementing software engineering best practices
- Strengthened application security posture by resolving critical DAST scan vulnerabilities, implementing Auth0-based system lockdown protocols, and configuring enhanced HSTS security headers
- Built SQL-procedure-based PII scrambling solution allowing developers to pull anonymized production data subsets locally, reducing bug replication time from hours to minutes
- Redesigned database architecture by unifying disparate data sources, establishing schema relationships in PostgreSQL and RDS Aurora, and implementing migration patterns for over 7TB of course data
- Authored 10+ comprehensive technical documentation pieces in Confluence covering AWS architecture, cloud migration strategies, and Infrastructure as Code patterns, improving developer onboarding
- Created and delivered 4+ technical knowledge-sharing sessions on AWS architecture, cloud security best practices, and cloud/database migration strategies for engineering teams

Software Engineering Co-Op, IFA Group – Ladson, SC Aug 2023 – May 2024

- Led team of 4 developing containerized warehouse inventory system using Docker, React, Flask, AWS, and MySQL, delivering real-time inventory tracking through RESTful API integration with SAP endpoints
- Authored System Requirements and Design Specification documents collaborating with warehouse stakeholders, establishing clear technical architecture and deployment strategy for cloud-based solution
- Delivered end-to-end cloud-deployed system within 6 months using GitHub for version control and CI/CD, enabling previously non-existent real-time inventory awareness across multiple warehouse locations

Software Engineering Intern, Savvas Learning Company – Remote, USA May 2023 – Aug 2023

- Developed full-stack solutions for Savvas Realize K-12 platform using Angular micro-frontends, GraphQL, RxJS, Spring Boot, MySQL, implementing software engineering best practices for testing and deployment
- Optimized GraphQL API queries by refactoring data-fetching logic and eliminating over-fetching, reducing payload sizes and improving application performance across distributed microservices architecture
- Won summer hackathon by leading development of PowerBI unique student insights dashboard, demonstrating data analysis and visualization skills for educational technology stakeholders
- Improved API test coverage by 19% through automated Karate testing framework CI/CD integration with GitHub Actions, establishing baseline quality metrics measured by JaCoCo code coverage analysis

Data Engineering Intern, Vision Software Solutions – Charleston, SC Sept 2022 – Jan 2023

- Containerized ETL pipeline for credit scoring algorithm using Docker and deployed infrastructure using Terraform Infrastructure as Code, improving system reliability and enabling consistent deployments
- Optimized MongoDB queries by reducing over-fetching and restructuring aggregation pipelines, improving credit scoring algorithm load times by 11% and reducing database query execution time

Education

College of Charleston – BS in Computer Science, GPA 3.8/4.0 May 2024

Security Clearances & Certifications

Public Trust – Active Feb 2025
AWS SAA-C03 – AWS Solutions Architect - Associate (expected by Jan 2025) Nov 2025